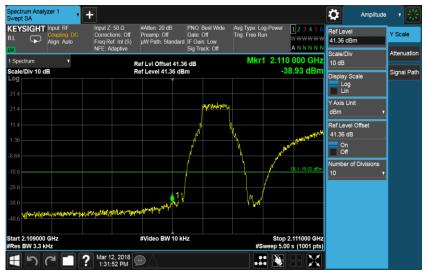


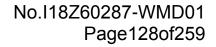
Port C, Channel Position B, LTE 15.0MHz



EYSIGHT Input: RF L Align: Auto	Input Z: 50 Ω #Atten: 2 Corrections: Off Preamp: Freq Ref: Int (S) μW Path NFE: Adaptive		Avg Type: Log-Power Trig: Free Run	123456 WWWWWW ANNNNN	Ref Level 18.36 dBm	Y Scale
Spectrum v cale/Div 10 dB		fset 41.36 dB 18.36 dBm	Mkr1 2.108 -3	905 GHz 4.11 dBm	Scale/Div 10 dB Display Scale Log Lin	Signal Pa
					Y Axis Unit dBm ▼ Ref Level Offset 41.36 dB	
1.6				DL1-32.03 c	On Off Number of Divisions 10 v	
art 2.104000 GHz les BW 51 kHz	#Video I	3W 150 kHz	Stop 2 #Sweep 5.00	2.109000 GHz s (1001 pts)		

Port C, Channel Position B, LTE 20.0MHz







KEYSIGHT Input: RF RL Coupling: DC Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 20 dB PNO: I Preamp: Off Gate: 0 µW Path: Standard IF Gair Sig Tra	1: Low		17.36 dBm	Y Scale
I Spectrum v Scale/Div 10 dB		Ref Lvi Offset 41.36 dB Ref Level 17.36 dBm		2.108 735 GHz -35.43 dBm		Attenuation
-og 7.36					Log Lin	
					Y Axis Unit dBm	
					Ref Level Offset 41.36 dB	
32.6				DL1-32 1 Bm	On Off	
42.6				oper oper part demonst	Number of Divisions	
72.6						
Start 2.104000 GHz		#Video BW 150 kHz		Stop 2.109000 GHz		



A.4 Conducted Spurious Emission

A.4.1 Reference

FCC CFR 47 Part 27, Clause 27.53(h)

A.4.2 Method of measurement

In accordance with FCC rules, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

The spurious emissions from the antenna terminal were measured. The transmitter output power was attenuated using an attenuator and the frequency spectrum investigated from 3KHz to 22GHz. The resolution bandwidth of 1MHz was employed for frequency band 3KHz to 22GHz. The spectrum analyzer detector was set to RMS.

For MIMO mode configurations, the limit was adjusted with a correction of -6.02dB [10Log4] by using the Measure and Add 10Log(N) dB technique according to FCC KDB 662911 D01 accounting for simultaneous transmission from all antenna ports. Then the limit was adjusted to -19.02dBm.

A.4.3 Measurement limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10\log(P) dB$.

A.4.4 Measurement results

Configuration WCDMA-1C QPSK

Channel Bandwidth	RBW	Limit
	(MHz)	(dBm)
5.0 MHz	1.0	-13.00

Port C, Channel Position B

L Coupling: DC Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 22 dB Preamp: Off µW Path: Standa	PNO: Fast Gate: Off rd IF Gain: Low Sig Track: Off	Avg Type: Log-Powe Trig: Free Run	er 123456 WWWWWW ANNNNN		
1 Spectrum	R	ef Lvi Offset 41.			2.648 8 GHz	Marker Frequency 2.648824763 GHz	Settings
cale/Div 10 dB	R	ef Level 51.23 d	Bm		-26.46 dBm	Marker Mode	Peak Search
41.2						 Normal 	Pk Searc
31.2						Delta (∆)	Config
						Fixed	Properti
							Marker Function
						off	Marker-
						Delta Marker (Reset Delta)	Marker-
					DL1 -13.00 dBm	Marker Table	Counter
18.8					. 1	On Off	
				hul		Marker Settings	
38.8						Diagram	
						All Markers Off	
tart 3 kHz Res BW 1.0 MHz		#Video BW 3.0	MHz		Stop 3.000 GHz 20.0 s (2000 pts)	Couple Markers On	

No.I18Z60287-WMD01 Page130of259



KEYSIGHT Input: RF RL Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 6 dB Preamp: Off µW Path: Standard	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	Avg Type: Log-Power Trig: Free Run	123456 WWWWWW ANNNNN	Select Marker Marker 1	
1 Spectrum 🔹	F	Ref Lvi Offset 44.26	dB		4.226 GHz	Marker Frequency 4.225612806 GHz	Settings
Cale/Div 10 dB		Ref Level 23.23 dB	m		28.36 dBm	Marker Mode Normal Detta (Δ) Fixed Off Detta Marker	Peak Search Pk Searcl Config Propertie: Marker Function Marker→
36.8						(Reset Delta) Marker Table On Off Marker Settings Diagram All Markers Off	Counter
tart 3.000 GHz Res BW 1.0 MHz		#Video BW 3.0 Mi	Hz		op 10.000 GHz 0 s (2000 pts)	Couple Markers On Off	

Spectrum Analyzer Swept SA	1 ,	F						*	Marker	
	ut: RF upling: DC gn: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 0 dB Preamp: Off µW Path: Standard	PNO: Fast Gate: Off IF Gain: High Sig Track: Off	Avg Type: Powe Trig: Free Run	w	23456	Select Mar Marker 1	ker	
Spectrum	•	F	tef Lvi Offset 43.8) dB	Mki		568 GHz	Marker Fr 21.56778	equency 3892 GHz	Settings
cale/Div 10 dB		R	tef Level 19.54 dB	m		-40.	28 dBm	Peak	Search	Peak Search
								Nex	t Peak	Pk Search Config
								Next	Pk Right	Properties
						0	L1-13.00 dBm	Next	Pk Left	Marker Function
								Minim	um Peak	Marker→
							<u>1</u>	Pk-Pi	Search	Counter
i0.5	~~~~~							Mark	er Delta	
								Mk	r→CF	
									→Ref Lvl	
tart 10.000 GĤz Res BW 1.0 MHz			#Video BW 3.0 Mł	łz*	#Swe		22.000 GHz (2000 pts)	Continuou Search On	is Peak	
1 76		Mar 12, 2018 2:40:52 PM	\mathbb{D}					Off		

Port C, Channel Position M



No.I18Z60287-WMD01 Page131of259



KEYSIGHT Input: RF RL Align: Auto	Corrections: Off Pre	en: 6 dB PNO: Fast amp: Off Gate: Off Path: Standard IF Gain: Low Sig Track: Off	Avg Type: Log-Power Trig: Free Run A N N N N	6.500000000 GHz
Spectrum v cale/Div 10 dB		vI Offset 44.26 dB evel 23.23 dBm	Mkr1 4.264 GH: -28.35 dBn	7.00000000 GHz
				Full Span Start Freq 3.000000000 GHz
6.77 16.8			DL1-13.00 dBr	10.000000000 GHz
26.8	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		AUTO TUNE CF Step 700.000000 MHz
				Auto Man Freq Offset 0 Hz
itart 3.000 GHz Res BW 1.0 MHz	#Vic	leo BW 3.0 MHz	Stop 10.000 GH #Sweep 20.0 s (2000 pts	X Axis Scale



Port C, Channel Position T



No.I18Z60287-WMD01 Page132of259



KEYSIGHT Input: RF RL Align: Auto		Preamp: Off Gat µW Path: Standard IF C	e:Off Trig:l	Type: Log-Power Free Run A N N I	Marker 1	
I Spectrum 🔹		Ref LvI Offset 44.26 dB		Mkr1 4.306 0		Settings
Scale/Div 10 dB		Ref Level 23.23 dBm		-26.76 d	Marker Mode	Peak Search Pk Searc
					Delta (Δ)	Config Propertie
				DL1 -13.0	Di dBm	Marker Function
	<u>م</u> ا				Delta Marker	Marker-
36.8			~~~~~		(Reset Delta) Marker Table On	Counter
					Off Marker Settings Diagram	
					All Markers Off	
tart 3.000 GHz Res BW 1.0 MHz		#Video BW 3.0 MHz		Stop 10.000 #Sweep 20.0 s (2000		

Spectrum Analyzer 1 Swept SA	• +					C Marker	
KEYSIGHT Input: RF L Align: Auto	C Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 0 dB Preamp: Off µW Path: Standard	PNO: Fast Gate: Off IF Gain: High Sig Track: Off		123456 WWWWWW ANNNNN	Select Marker Marker 1	
Spectrum v		Ref LvI Offset 43.80	, U	Mkr1 21	.592 GHz	Marker Frequency 21.591795898 GHz	Settings
cale/Div 10 dB		Ref Level 19.54 dB	m	-4().25 dBm	Peak Search	Peak Search
						Next Peak	Pk Searc Config
						Next Pk Right	Propertie
					DL1-13.00 dBm	Next Pk Left	Marker Function
						Minimum Peak	Marker→
40.5					<u>1</u>	Pk-Pk Search	Counter
60.5						Marker Deita	
						Mkr→CF	
						Mkr→Ref Lvl	
tart 10.000 GHz Res BW 1.0 MHz		#Video BW 3.0 MH	lz*	Stop #Sweep 20.0	22.000 GHz s (2000 pts)	- On	
150	Mar 12, 2018 2:49:44 PM	\odot				Off	

Configuration WCDMA-MIMO-1C 16QAM

Channal Randwidth	RBW	Limit
Channel Bandwidth	(MHz)	(dBm)
5.0 MHz	1.0	-19.02



Port C, Channel Position B

L Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 22 dB Preamp: Off µW Path: Standard	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	Avg Type: Log-Power Trig: Free Run	123456 WWWWWW ANNNNN	Select Marker Marker 1	
Spectrum	ŗ	Ref LvI Offset 41.0 Ref Level 51.23 dB	3 dB		653 3 GHz 26.44 dBm	Marker Frequency 2.653327010 GHz Marker Mode	Settings Peak Search
						 Normal Delta (Δ) 	Pk Searc Config
						Fixed	Propertie Marker Function
						Off Delta Marker (Reset Delta)	Marker-
8.8					DI <u>1 -19.02 dBm</u>	Marker Table On Off	Counter
8.8				Mm		Marker Settings Diagram All Markers Off	
art 3 kHz Res BW 1.0 MHz		#Video BW 3.0 M	Hz		top 3.000 GHz .0 s (2000 pts)	Occurring Manaharan	

Spectrum Analy Swept SA	/zer 1	+					Marker	- * 条
	Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 6 dB Preamp: Off µW Path: Standard	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	Avg Type: Log-Power Trig: Free Run	123456 WWWWWW ANNNNN	Select Marker Marker 1	,
1 Spectrum	v	F	tef Lvi Offset 44.2	6 dB		4.226 GHz 8.56 dBm	Marker Frequency 4.225612806 GHz	Settings
Scale/Div 10 dl	В		tef Level 23.23 dB	m	-2	6.56 GBIII	Marker Mode	Peak Search Pk Search
							Delta (∆)	Config Properties
							Fixed	Marker Function
	Ŷ ¹ -						Delta Marker (Reset Delta)	Marker→
46.8	,	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		~~~~		~~~~	Marker Table On Off	Counter
							Marker Settings Diagram	
							All Markers Off	
tart 3.000 GH Res BW 1.0 M			#Video BW 3.0 M	Hz		p 10.000 GHz 0 s (2000 pts)		
1		Mar 12, 2018 2:53:38 PM	ÐA					

Coupling: DC Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	Preamp: Off G µW Path: Standard IF	NO: Fast late: Off Gain: High ig Track: Off	Avg Type: Power (Trig: Free Run	(RMS) 1 2 3 4 5 6 W WWWWW A N N N N N	Select Marker Marker 1	
ipectrum v		Ref Lvi Offset 43.80 d	-	Mkr1	21.592 GHz	Marker Frequency 21.591795898 GHz	Settings
ale/Div 10 dB		Ref Level 19.54 dBm			-40.26 dBm	Peak Search	Peak Search
						Next Peak	Pk Searc Config
46						Next Pk Right	Propertie
					DL1 -19.02 dBm	Next Pk Left	Marker Function
						Minimum Peak	Marker-
.5					<u> </u>	Pk-Pk Search	Counter
.5	~~~~					Marker Delta	
						Mkr→CF	
						Mkr→Ref Lvl Continuous Peak	
ert 10.000 GHz es BW 1.0 MHz		#Video BW 3.0 MHz*		#Sweep	Stop 22.000 GHz p 20.0 s (2000 pts)	Search On Off	



Port C, Channel Position M

L Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 22 dB PNO: Fast Preamp: Off Gate: Off µW Path: Standard IF Gain: Low Sig Track: Off	Avg Type: Log-Power Trig: Free Run A N N N N	Marker 1
Spectrum v scale/Div 10 dB		Ref Lvi Offset 41.03 dB Ref Level 51.23 dBm	Mkr1 2.651 8 GH -26.39 dBr	Z Marker Frequency 2.651826261 GHz
				 Normal Pk Sez Config Delta (Δ)
				Fixed Marker Off
23				Delta Marker (Reset Delta)
8.8			01 <u>1 -19.02 dB</u>	Marker Table
3.8				All Markers Off
art 3 kHz tes BW 1.0 MHz		∦ #Video BW 3.0 MHz	Stop 3.000 GF #Sweep 20.0 s (2000 pt	tz S) On Off

Spectrum Analyzer 1					Marker	7 崇
RL Align: Auto	Input Z: 50 Ω #Atten: 6 dB Corrections: Off Preamp: Off Freq Ref: Int (S) μW Path: Standard NFE: Adaptive	Gate: Off T	rig: Free Run	23456 WWWWW NNNNN	Select Marker Marker 1	
1 Spectrum 🔻	Ref Lvl Offset 44.2	6 dB	Mkr1 4.2	64 GHz	Marker Frequency 4.264132066 GHz	Settings
Scale/Div 10 dB	Ref Level 23.23 dB	m	-28.4	49 dBm	Marker Mode	Peak Search
					 Normal Delta (Δ) 	Pk Search Config
3.23					Fixed	Properties
16.8			OL	.1 -19.02 dBm	Off	Marker Function
26.8					Delta Marker (Reset Delta)	Marker→
36.8				~~~~	Marker Table On	Counter
					Off Marker Settings	
					All Markers Off	
start 3.000 GHz	#Video BW 3.0 M	Hz		0.000 GHz	Couple Markers	
Res BW 1.0 MHz	Mar 12, 2018		#Sweep 20.0 s	(2000 pts)	Off	

L Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 0 dB Preamp: Off µW Path: Standard	PNO: Fast Gate: Off IF Gain: High Sig Track: Off	Avg Type: Powe Trig: Free Run	r (RMS) 12 3 4 5 6 WWWWWW A N N N N N	Center Frequency 16.000000000 GHz	Settir
Spectrum v cale/Div 10 dB		Ref LvI Offset 43.8 Ref Level 19.54 dB		Mkr	1 21.562 GHz -40.22 dBm	Span 12.0000000 GHz Swept Span Zero Span	
						Full Span Start Freq 10.00000000 GHz	
					DL1 -19.02 dBm	Stop Freq 22.00000000 GHz AUTO TUNE	
0.5	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				1	CF Step 1.200000000 GHz	
						Man Freq Offset 0 Hz X Axis Scale	
tart 10.000 GHz Res BW 1.0 MHz	Mar 12, 2018 2:58:09 PM	#Video BW 3.0 MH	łz*	#Swe	Stop 22.000 GHz ep 20.0 s (2000 pts)	Log Lin Signal Track	



Port C, Channel Position T

KEYSIGHT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 22 dB Preamp: Off µW Path: Standard	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off		123456 WWWWWW ANNNNN	Select Marker Marker 1	
Spectrum v Scale/Div 10 dB		Ref LvI Offset 41.03 Ref Level 51.23 dB	3 dB	Mkr1 2.6 -26	63 8 GHz 5.38 dBm	Marker Frequency 2.663832252 GHz Marker Mode	Settings Peak Search
						 Normal Delta (Δ) Fixed Off Delta Marker 	Pk Searc Config Propertie Marker Function Marker
8.77 18.8 26.8 18.8 19.8		#Video BW 3.0 Mi	42*		ni 1 <u>-19.02 dBm</u> 1 p 3.000 GHz	(Reset Delta) Marker Table On Off Marker Settings Diagram All Markers Off Couple Markers On	Counter

Ispectrum V Scale/Div 10 dB - 132 - 132 - 132 - 132 - 132 - 132 - 16.6 - -6.77 - -16.6 - -6.68 - -6.68 -	Sig Track: Off Ref Lvi Offset 44.26 dB Ref Level 23.23 dBm	A N N N N N Mkr1 4.308 GHz -26.97 dBm	Marker Frequency 4.307903952 GHz	Settings Peak Search Pk Search Config Properties Marker Function
13 2 3 23 6 77 16 8 26 8 1	Ref Level 23.23 dBm		Peak Search Next Peak Next Pk Right Next Pk Left	Search Pk Search Config Properties Marker
3 23 6 77 16 8 26 8 36 8 4 7 36 8		0L1 +19.02 uBm	Next Pk Right Next Pk Left	Config Properties Marker
6.77 16.8 26.8 1 38.8 1 1 1 1 1 1 1 1 1 1 1 1 1		DL1-19-02 uBm	Next Pk Left	Marker
6.8 16.8 16.8		OL1-19-02 dBm		
		DL1-19.02 uBm	Minimum Peak	
8.8				Marker→
			Pk-Pk Search	Counter
			Marker Delta	
			Mkr→CF	
			Mkr→Ref Lvl	
tart 3.000 GHz Res BW 1.0 MHz	#Video BW 3.0 MHz*	Stop 10.000 GHz #Sweep 20.0 s (2000 pts)		

EYSIGHT Input: RF L	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 0 dB Preamp: Off µW Path: Standard	PNO: Fast Gate: Off IF Gain: High Sig Track: Off	Avg Type: Power (RMS) Trig: Free Run	123456 WWWWWW ANNNNN	Select Marker Marker 1	
Spectrum v cale/Div 10 dB	F	Ref Lvi Offset 43.80 Ref Level 19.54 dBi) dB).796 GHz 0.76 dBm	20.750050155 0112	Settings Peak
54						Marker Mode Normal	Search Pk Searc Config
						Delta (Δ) Fixed	Properti
).5					DL1 -19.02 dBm	off	Marker Functior
					1	Delta Marker (Reset Delta)	Marker- Counter
0.5						Marker Table On Off	
						Marker Settings Diagram	
nrt 10.000 GHz es BW 1.0 MHz		#Video BW 3.0 MH	łz*		p 22.000 GHz 0 s (2000 pts)	All Markers Off Couple Markers On	



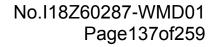
Configuration WCDMA-MIMO-2C 16QAM

Channel Bandwidth	RBW (MHz)	Limit (dBm)
5.0 MHz	1.0	-19.02

Port C, Channel Position M

Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF L Coupling: DC Align: Auto	Input Z: 50 Ω #Atten: 22 dB PNO Fast Corrections: Off Preamp. Off Gate: Off Freq Ref. Int (S) μW Path: Standard iF Gain. Lo NFE: Adaptive Sig Track		
1 Spectrum v Scale/Div 10 dB	Ref LvI Offset 41.03 dB Ref Level 51.23 dBm	Mkr1 2.654 8 GHz -26.33 dBm Marker Frequency 2.654827759 GHz Marker Mode Seat	<
		Normal Pk S Conf Delta (Δ) Fixed Off Delta Marker (Reset Delta)	fig ertie: ker ction ker→
8.77 18.8 28.8 33.8 tart 3 KHz	#Video BW 3.0 MHz	Marker Table Of Marker Settings Diagram All Markers Off Couple Markers	ntér
Start 3 kHz #Res BW 1.0 MHz	#Video BW 3.0 MHz	Stop 3.000 GHz #Sweep 20.0 s (2000 pts) off	

EYSIGHT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω #Atten: 6 dB PNO. Fast Corrections: Off Preamp: Off Gate Off Freq Ref: Int (S) μW Path: Standard IF Gain: Low NFE: Adaptive Sig Track: Off	Avg Type: Log-Power 123456 Trig: Free Run ANNNNN		
Spectrum 🔻	Ref LvI Offset 44.26 dB	Mkr1 4.264 GHz	Marker Frequency 4.264132066 GHz	Settings
ale/Div 10 dB 99 32 23 77 8.8 8.8 8.8	Ref Level 23.23 dBm	-32.06 dBm	Marker Mode Normal Delta (Δ) Fixed Off Delta Marker (Reset Delta) Marker Table	Peak Search Pk Sear Config Propertii Marker Function Marker– Counter
5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8	#Video BW 3.0 MHz	Stop 10.000 GHz #Sweep 20.0 s (2000 pts)	On Off Marker Settings Diagram All Markers Off Couple off Off	





R L Align: Auto	Input Z: 50 Ω #Atten: 0 dB PNO: Fast Corrections: Off Preamp: Off Gate: Off Freq Ref: Int (S) μW Path: Standard IF Gain: Hi NFE: Adaptive SigTrack:		Select Marker Marker 1	
1 Spectrum v Scale/Div 10 dB	Ref Lvi Offset 43.80 dB Ref Level 19.54 dBm	Mkr1 21.580 GHz -40.25 dBm	Marker Frequency 21.579789895 GHz Marker Mode	
0 46		DL1.19.02 dBm	Normal Pk S Delta (Δ) Prop Fixed Mart	Searcl Ifig pertie: ker ction ker→
60.5 70.5 Start 10.000 GHz Res BW 1.0 MHz	#Video BW 3.0 MHz	Stop 22.000 GHz #Sweep 20.0 s (2000 pts)		

Configuration LTE-MIMO-1C QPSK

Channel Bandwidth	RBW	Limit
	(MHz)	(dBm)
5.0 MHz	1.0	-19.02
10.0 MHz	1.0	-19.02
15.0 MHz	1.0	-19.02
20.0 MHz	1.0	-19.02

Port C, Channel Position B 5.0 MHz

L Coupling: DC Align: Auto			Avg Type: Log-Power Trig: Free Run	Marker 1	
Spectrum v Scale/Div 10 dB	· · ·	set 41.03 dB	Mkr1 2.669 8 GH -26.43 dBn	2.003000240 0112	Settings Peak
41.2				Normal	Search Pk Searc Config
				Delta (Δ)	Propertie Marker
11.2				Off Delta Marker	Function Marker-
			Di 1 -19.02 dBr	(Reset Delta) Marker Table On	Counter
8.8				Off Marker Settings Diagram	
				All Markers Off Couple Markers	
tart 3 kHz Res BW 1.0 MHz	#Video B	W 3.0 MHz	Stop 3.000 GH #Sweep 20.0 s (2000 pts	z ion	

No.I18Z60287-WMD01 Page138of259



LL Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 6 dB PNO: Fast Preamp: Off Gate: Off µW Path: Standard IF Gain: Low Sig Track: Off	Avg Type: Log-Power Trig: Free Run	W Marker 1	
Spectrum v		Ref LvI Offset 44.26 dB Ref Level 23.23 dBm	Mkr1 4.226 GH -30.18 dBr	4.225612806 GHz	Settings
.og	· · · · ·	Ker Level 23.23 dBm	-30.10 UDI		Peak Search
					Pk Searc
				Delta (Δ)	Config
				Fixed	Propertie
			DL1 -19.02 dB		Marker Function
6.81				Delta Marker	Marker-
6.8			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	(Reset Delta) Marker Table	Counter
6.8				On Off	
				Marker Settings Diagram	
				All Markers Off	
art 3.000 GHz Res BW 1.0 MHz		#Video BW 3.0 MHz	Stop 10.000 GF #Sweep 20.0 s (2000 pt		



Port C, Channel Position M 5.0 MHz



No.I18Z60287-WMD01 Page139of259



KEYSIGHT Input: RF RL Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	Preamp: Off µW Path: Standard	PNO: Fast Gate: Off F Gain: Low Sig Track: Off	Avg Type: Log-Power Trig: Free Run	123456 WWWWWW ANNNNN	Select Marker Marker 1	
I Spectrum v		Ref LvI Offset 44.26 Ref Level 23.23 dBm			4.310 GHz 27.67 dBm	Marker Frequency 4.309654827 GHz	Settings Peak
	· · · · ·	Cel Level 23.25 dBit				Marker Mode	Search
13.2						Normal	Pk Searc
						Delta (Δ)	Config
							Propertie
5.77						Fixed	Marker
					DL1 -19.02 dBm	Off	Function
6.8	1					Delta Marker (Reset Delta)	Marker
6.8		\sim	~~~~~		~~~~	Marker Table	Counter
16.8						On Off	
						Karker Settings Diagram	
						All Markers Off	
tart 3.000 GHz Res BW 1.0 MHz		#Video BW 3.0 MH	z		op 10.000 GHz .0 s (2000 pts)	Couple Markers On	1



Port C, Channel Position T 5.0 MHz



No.I18Z60287-WMD01 Page140of259



KEYSIGHT Input: RF RL Coupling: DC Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 6 dB Preamp: Off µW Path: Standard	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	Avg Type: Log-Power Trig: Free Run	123456 WWWWWW ANNNNN		
I Spectrum v Scale/Div 10 dB		Ref LvI Offset 44.2 Ref Level 23.23 dB			4.394 GHz 23.58 dBm	Marker Frequency 4.393696848 GHz Marker Mode	Settings Peak Search
	1					Normal Delta (Δ) Fixed Off	Pk Searcl Config Properties Marker Function
16.8 16.8 16.8 16.8 16.8 16.8 16.8						Delta Marker (Reset Delta) Marker Table On Off Marker Settings Diagram	Marker→ Counter
tart 3.000 GHz Res BW 1.0 MHz		#Video BW 3.0 M	Hz		op 10.000 GHz .0 s (2000 pts)	All Markers Off Couple Markers On Off	



Port C, Channel Position B 10.0 MHz



No.I18Z60287-WMD01 Page141of259



KEYSIGHT Input: RF RL Coupling: DC Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 6 dB PNO: Fast Preamp: Off Gate: Off µW Path: Standard IF Gain: Low Sig Track: Off	Avg Type: Log-Power Trig: Free Run	W Marker 1	
Spectrum v		Ref LvI Offset 44.26 dB Ref Level 23.23 dBm	Mkr1 4.229 GH -31.98 dBi	4.223114007 0112	Settings
.og		Ker Level 23.23 dBm	-31.36 dBi	Marker Mode	Peak Search
				Delta (Δ)	Pk Searc Config
23				Fixed	Propertie
6.8			OL1 -19.02 JE	Off	Marker Function
6.8				Delta Marker (Reset Delta)	Marker-
6.8			~~~~~~	(Reset Deita) Marker Table On	Counter
				Off	I
				Marker Settings Diagram	
				All Markers Off	
tart 3.000 GHz Res BW 1.0 MHz		#Video BW 3.0 MHz	Stop 10.000 GH #Sweep 20.0 s (2000 pt		

Spectrum Analyz Swept SA	ter 1 💡	+					Marker	▼ \$ }
	Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 0 dB Preamp: Off µW Path: Standard	PNO: Fast Gate: Off IF Gain: High Sig Track: Off	Avg Type: Log-Powe Trig: Free Run	1 2 3 4 5 6 WWWWWW ANNNN	Select Marker Marker 1	,
1 Spectrum Scale/Div 10 dE	*		tef Lvi Offset 43.8 tef Level 19.54 dB			21.604 GHz -40.25 dBm		Settings Peak
9.54							Marker Mode Normal	Search Pk Search Config
							Delta (Δ) Fixed	Properties
						DL1 -19.02 dBm	Off	Marker Function
						1	Delta Marker (Reset Delta)	Marker→ Counter
-40.5							Marker Table On Off	Counter
							Marker Settings Diagram	
-70.5 Start 10.000 GH	z		#Video BW 3.0 M	Hz	s	Stop 22.000 GHz	All Markers Off Couple Markers	
#Res BW 1.0 Mi		Mar 12, 2018 4:00:25 PM			#Sweep 2	20.0 s (2000 pts)	On Off	

Port C, Channel Position M 10.0 MHz



No.I18Z60287-WMD01 Page142of259



KEYSIGHT Input: RF RL Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 6 dB Preamp: Off µW Path: Standard	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	Avg Type: Log-Power Trig: Free Run	123456 WWWWWW ANNNNN	Select Marker Marker 1	
I Spectrum v	F	Ref LvI Offset 44.26 Ref Level 23.23 dB	6 dB		4.310 GHz 29.79 dBm	Marker Frequency 4.309654827 GHz	Settings Peak
13 2					0L1-19-02 uBm	Marker Mode Normal Delta (Δ) Fixed Off Delta Marker (Reset Delta)	Peak Search Pk Searc Config Propertie Marker Function Marker→
36.8						Marker Table Off Marker Settings Diagram All Markers Off	Counter
tart 3.000 GHz Res BW 1.0 MHz		#Video BW 3.0 M	Hz		op 10.000 GHz .0 s (2000 pts)		

Spectrum Analyze Swept SA	er 1 💡	+					Marker	- * 法
	nput: RF Coupling: DC Nign: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 0 dB Preamp: Off µW Path: Standard	PNO: Fast Gate: Off IF Gain: High Sig Track: Off	Avg Type: Log-Power Trig: Free Run	123456 WWWWWW ANNNNN		
1 Spectrum Scale/Div 10 dB	•		tef Lvi Offset 43.80 tef Level 19.54 dB			21.580 GHz 40.23 dBm	Marker Frequency 21.579789895 GHz Marker Mode	Settings Peak
9.54							Normal	Search Pk Search Config
							Delta (Δ) Fixed	Properties
						DL1 -19.02 dBm	off	Marker Function Marker→
-30.5						1	Delta Marker (Reset Delta) Marker Table	Counter
							On Off / Marker Settings	
							Diagram All Markers Off	
Start 10.000 GHz #Res BW 1.0 MH			#Video BW 3.0 M	Hz		top 22.000 GHz 0.0 s (2000 pts)		
 		Mar 12, 2018 4:02:23 PM	$\square \triangle$			🔀		

Port C, Channel Position T 10.0 MHz



No.I18Z60287-WMD01 Page143of259



RL Align: AL	DC Corrections: O		Avg Type: Log-Power Trig: Free Run A N N N N	Marker 1	
1 Spectrum		Ref LvI Offset 44.26 dB	Mkr1 4.390 GH		Settings
ccale/Div 10 dB .og 13.2 3.23 6.77 6.8 226.8 36.8		Ref Level 23.23 dBm	-25.68 dBn	Marker Mode Normal Detta (Δ) Fixed Off Detta Marker (Reset Detta) Marker Table	Peak Search Pk Searc Config Propertie Marker Function Marker Counter
46.8 56.8 66.8 start 3.000 GHz Res BW 1.0 MHz	Mar 12, 2011 4:08:59 PM	#Video BW 3.0 MHz	Stop 10.000 GH #Sweep 20.0 s (2000 ptr	On Off Marker Settings Diagram All Markers Off Couple Markers	

Spectrum Analyze Swept SA	er 1 🔻	+					Marker	▼ ⁸ / ₂ / ₂
	put: RF oupling: DC ign: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 0 dB Preamp: Off µW Path: Standard	PNO: Fast Gate: Off IF Gain: High Sig Track: Off	Avg Type: Log-Power Trig: Free Run	123456 wwwwww ANNNNN	Select Marker Marker 1	
1 Spectrum Scale/Div 10 dB	•		tef Lvi Offset 43.8 tef Level 19.54 dB			1.586 GHz 0.20 dBm	Marker Frequency 21.585792896 GHz Marker Mode	Settings Peak
9.54							Normal	Search Pk Search Config
							Delta (Δ) Fixed	Properties Marker
						DL1 -19.02 dBm	off	Marker Function Marker→
-30.5						1	Delta Marker (Reset Delta) Marker Table	Counter
							On Off / Marker Settings	
							Diagram All Markers Off	
Start 10.000 GHz #Res BW 1.0 MH:			#Video BW 3.0 M	Hz		p 22.000 GHz 0 s (2000 pts)	Couple Markers On Off	
י ר 📕		Mar 12, 2018 4:09:32 PM	$\square \triangle$					

Port C, Channel Position B 15.0 MHz



No.I18Z60287-WMD01 Page144of259



L Coupling: DC Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 6 dB PNO: Fast Preamp: Off Gate: Off µW Path: Standard IF Gain: Low Sig Track: Off	Avg Type: Log-Power Trig: Free Run A N N N N	W Marker 1	
Spectrum v		Ref Lvi Offset 44.26 dB Ref Level 23.23 dBm	Mkr1 4.236 GH -32.95 dBr	4.2001100000 0112	Settings Peak
				Marker Mode Normal	Search Pk Searc
				Delta (Δ)	Config Propertie
				Fixed	Marker Function
6.8	1			Delta Marker (Reset Delta)	Marker-
5.8			~~~~~~	Marker Table On Off	Counter
				Marker Settings Diagram	
				All Markers Off	
tart 3.000 GHz Res BW 1.0 MHz		#Video BW 3.0 MHz	Stop 10.000 GF #Sweep 20.0 s (2000 pt		

Spectrum Analyz Swept SA	zer 1 ,	+					Marker	- * 影
	Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten: 0 dB Preamp: Off µW Path: Standard	PNO: Fast Gate: Off IF Gain: High Sig Track: Off	Avg Type: Log-Power Trig: Free Run	123456 WWWWWW ANNNNN		
1 Spectrum Scale/Div 10 dE	۲ 3		tef Lvi Offset 43.8 tef Level 19.54 dB			21.592 GHz 40.23 dBm	Marker Frequency 21.591795898 GHz Marker Mode	Settings Peak
9.54							Normal	Search Pk Search Config
							Delta (Δ) Fixed	Properties
						DL1 -19.02 dBm	off	Marker Function
						1	Delta Marker (Reset Delta) Marker Table	Marker→ Counter
-50.5							On Off	
							Marker Settings Diagram All Markers Off	
Start 10.000 GH #Res BW 1.0 M			#Video BW 3.0 M	Hz		top 22.000 GHz 0.0 s (2000 pts)	Couple Markers	
1 5		Mar 12, 2018 4:12:20 PM						

Port C, Channel Position M 15.0 MHz

